"Winning [C Block] bidders fashioned bids in accordance with the best information available at the time. Subsequent unforeseen and unforeseeable events, however, conspired to diminish the value of the licenses and close the financing window for start-up PCS ventures. The major event was collapse in market value for radio licenses."

Larry Darby, Darby Associates, 7/21/97 (emphasis added)

"NEW YORK, June 20 (Reuter) - Chase Telecommunications Inc's \$160 million junk bond deal was indefinitely postponed late on Thursday as investors continued to turn a cold shoulder to startup telecom companies, according to a source close to the deal."

- Reuters, June 20, 1997 (emphasis added).

"To the extent that the C Block delays continue, it is a boon to incumbent operators, as the competitive landscape will not become as heated as quickly as anticipated."

- Jeffrey L. Hines, NatWest Securities, 6/30/97

"Omnipoint should also benefit if the terms [of the Government financing] are not changed because some of its competition would come even later, if ever, to the market."

Richard Prentiss, Raymond James and Associates,
 7/8/97

"The continued delays in C Block financing are a positive for both cellular and PCS: (1) it delays a new entrant and (2) any reduction/easing of terms will create a less desperate competitor and therefore maintain a more rational market. This particularly extends the lead enjoyed by existing PCS players such as Omnipoint, Western Wireless, and Aerial."

- Thomas J. Lee, Smith Barney, 7/11/97

Conclusion

- ◆ There is a win/win solution for competition and taxpayers.
- Rescheduling keeps government whole.
 - Ability to ensure taxpayer and competition
- ◆ Limitations of a Reauction

Appendix 1: License Concentration

License Concentration of Cellular/PCS Licensees by POPs

Total Wireline POPs

| Company | Type of Carrier | Total PCS POPs | Cellular POPs | Total POPs | Percent of Total | Cumulative Total | Wireline POPs | Percent of Total | Cumulative Total |
|---------------------|--------------------|-------------------|----------------------|-----------------------|------------------|---------------------|------------------|------------------|---------------------|
| Mark Street | | | EST (MAY SE) 1303-76 | | 19 06% | 19.96% | 363,330,446 | 19.96% | 19.96% |
| Shirt Sales | | "是我是我们 | and the second | 2000 | 15 36% | 35,82% | 276,542,634 | 15,36% | 35.32% |
| PCS PrimeCo | Whelhe 2 3 | 61,812,211 | 149,979,864 | 211,792,075 | 11.64% | 46.96% | 211,792,075 | 11.64% | 46.96% |
| NextWave | Non-Wireline | 163,011,126 | - | 163,011,126 | 8.96% | 55.92% | - | 0.00% | 46.96% |
| Omnipoint | Non-Wireline | 131,044,147 | - | 131,044,147 | 7.20% | 63.12% | - | 0.00% | 46.96% |
| Western Wireless | Non-Wireline | 80,073,531 | 6,511,543 | 86,585,074 | 4.76% | 67.87% | - | 0.00% | 46.96% |
| BellSouth # 55 14 2 | Mireline | 26,029,599 | e. 64,986,800 l | 81.016.408 | 4.45% | 72.33% | 81,016,408 | 4.45% | 51.41% |
| GIE CHE CONTROL | | 数2007元4 | an Casacia | # 76 527 (K 0 | 4 4 7 % | 76.69% | 79,527,100 | 4.37% | 55.78% |
| Sourcediffe | A Profession | 6,185,124 | 5 55,897,816 | £64,582,440 | 3,55% | 80.24% | 64,582,440 | 3.55% | 59,33% |
| ALIEBERS是 | | 331 (8) 277 | 25,089,303 | 12 St (459 580) | 3 11% | 83.35% | 56,569,580 | 3.11% | 62.44% |
| TDS/Aerial | Vitaline | 25,847,961 | 25,279,238 | 51,127,229 | 2.81% | 86.16% | 51,127,229 | 2.81% | 65.25% |
| Ameritech | : Whelme是图画 | 6,161,622 | 31,717,797 | 89,699,419 | 2.19% | 88.35% | 39,899,419 | 2,19% | 67.44% |
| Pocket | Non-Wireline | 35,114,380 | - | 35,114,380 | 1.93% | 90.28% | - | 0.00% | 67. 44 % |
| PacTel | . Wireline | * 33,854,632 | 1 1 2 4 5 1 | 33,854,632 | 1.86% | 92.14% | 33,854,632 | 1.86% | 69.30% |
| Intercel | Non-Wireline | 32,081,732 | - | 32,081,732 | 1.76% | 93.91% | - | 0.00% | 69.30% |
| U.S.West- | ∵ Wireline (de 4 | 22,182,428 | Transfer in | 22,182,428 | 1.22% | 95,12%- | 22,182,428 | 1,22% | 70.52% |

The top 3 wireline companies own nearly half of the available POPs in the U.S.

And, more than 70% of the available POPs in the U.S. are controlled by 11 wireline companies.

Source: FCC data and Donaldson, Lufkin & Jenrette Report, The Wireless Communications Industry (Spring 1997).

License Concentration of Cellular/PCS Licensees by Markets

| Ce | llular | Carriere | |
|----|--------|----------|--|

| | | | Cellular Carriers | |
|------|------------------------------------|------------------------|-------------------|------------------|
| | | 1996 | | |
| Rani | k Market Name | POPs | A | В |
| 1 | New York, NY | 18,400,203 | | BANM |
| 2 | Los Angeles, CA | 15,679,293 | | AirTouch |
| 3 | Chicago, IL | 8,467,720 | | AMERITECH |
| 4 | San Francisco, CA | 6,842,466 | | GTE |
| 5 | Philadelphia, PA | 5,984,423 | | BANM |
| 6 | Dallas, TX | 4,828,566 | | SBM |
| 7 | Detroit, MI | 4,785,173 | AirTouch | AMERITECH |
| 8 | Houston, TX | 4,598,155 | | GTE |
| 9 | Washington, DC | 4,410,587 | SBM | BANM |
| 10 | Boston, MA | 4,177,962 | | BANM |
| 11 | Atlanta, GA | 3,763,994 | AirTouch | BELLSOUTH |
| 12 | Miami, FL | 3,577,306 | AT&T | BELLSOUTH |
| 13 | Minneapolis, MN | 3,063,561 | AT&T | AirTouch |
| 14 | Seattle, WA | 3,055,225 | AT&T | AirTouch |
| 15 | Cleveland, OH | 2,940,521 | AirTouch | GTE |
| 16 | St Louis, MO | 2,807,363 | AMERITECH | SBM |
| 17 | Phoenix, AZ | 2,720,380 | BANM | AirTouch |
| 18 | San Diego, CA | 2,679,864 | GTE | AirTouch |
| 19 | Baltimore, MD | 2,552,338 | SBM | BANM |
| 20 | Pittsburgh, PA | 2,532,530 | AT&T | BANM |
| 21 | Tampa, FL | 2 394 524 | AT&T | GTE |
| 22 | Denver, CO | 2,386,290 | AT&T | AirTouch |
| 23 | Cincinnati, OH | 2,091,774 | AirTouch | AMERITECH |
| 24 | Portland, OR | 1.945.500 | AT&T | AirTouch |
| 25 | Kansas City, MO | 1,930,633 | AT&T/AirTouch | SBM |
| 26 | Charlotte, NC | 1,861,677 | BANM | ALLTEL |
| 27 | Sacramento, CA | 1,832,812 | AT&T | AirTouch |
| 28 | Milwaukee, Wi | 1,799,556 | BELLSOUTH | AMERITECH |
| 29 | Norfolk, VA | 1,799,556 | 360 Comm. | GTE |
| 30 | San Antonio, TX | 1,785,196 | AT&T | SBM |
| 31 | Nashville, TN | 1,726,045 | GTE | BELLSOUTH |
| 32 | Columbus, OH | 1,591,314 | AirTouch | AMERITECH |
| 33 | Providence, RI | 1,505,903 | SNET | BANM |
| 34 | Salt Lake City, UT | 1,497,885 | AT&T | AirTouch |
| 35 | Memphis, TN | 1,457,561 | GTE | BELLSOUTH |
| 36 | Orlando, FL | | AT&T | |
| 37 | • | 1,447,059 | GTE | BELLSOUTH |
| 38 | Louisville, KY Indianapolis, IN | 1,428,320 | BELLSOUTH | BELLSOUTH GTE |
| 39 | New Orleans, LA | 1,420,258 1,396,435 | | BELLSOUTH |
| 40 | | | Radiofone | |
| | Oklahoma City, OK | 1,368,004 | AT&T | SBM |
| 41 | Greensboro, NC | 1,330,742 | GTE | 360 Comm. |
| 42 | Birmingham, AL | 1,270,221 | GTE | BELLSOUTH |
| 43 | Raleigh, NC | 1,261,166 | GTE | 360 Comm. |
| | Buffalo, NY | 1,234,670 | SBM | BANM |
| | Dayton, OH | 1,218,672 | AMERITECH | AirTouch |
| | Jacksonville, FL | 1,208,139 | AT&T | BELLSOUTH |
| | Richmond, VA | 1,191,504 | BELLSOUTH | GTE |
| | Rochester, NY | 1,153,214 | SBM | BANM |
| | Hartford, CT | 1,121,164 | BANM | SNET |
| 50 | Albany, NY | 1,057,180 | SBM | BANM |

| DCG | Carri | ore |
|-----|-------|-----|
| | | |

| | - | | | | _ |
|-----------|-----------|-------------|----------|-----------------|-------------------------|
| A | В | С | D | E | F |
| OMPT | SPRINT | NextWave | OMPT | AT&T | Northcoast |
| SPRINT | PACTEL | NextWave | AT&T | Gabelli | Gabelli |
| AT&T | PRIMECO | Pocket | SPRINT | SPRINT | NextWave |
| SPRINT | PACTEL | GWI | AT&T | Western | NextWave |
| AT&T | SPRINT | OMPT | Comcast | Gabelli | NextWave |
| PRIMECO | SPRINT | Pocket | AT&T | AT&T | NextWave |
| AT&T | SPRINT | Pocket | NextWave | OMPT | OMPT |
| AERIAL | PRIMECO | NextWave | SPRINT | AT&T | Telecorp |
| SPRINT | AT&T | NextWave | Gabelli | OMPT | Gabelli |
| ATAT | SPRINT | NextWave | OMPT | OMPT | Northcoast |
| AT&T | Intercel | GWI | SPRINT | ALLTEL | NextWave |
| SPRINT | PRIMECO | GWI | AT&T | OMPT | OMPT |
| SPRINT | AERIAL | NextWave | U S WEST | AT&T | Northcoast |
| Western | SPRINT | NextWave | AT&T | Western | Western |
| AMERITECH | AT&T | NextWave | SPRINT | Western | Northcoast |
| AT&T | SPRINT | Pocket | OMPT | Western | NextWave |
| AT&T | SPRINT | REAUCTION | U S WEST | Western | Western |
| SPRINT | PACTEL | NextWave | AT&T | Gabelli | Central OR |
| SPRINT | AT&T | NextWave | Gabelli | Gabelli | OMPT |
| SPRINT | AERIAL | NextWave | AT&T | Radiofone | Devon |
| 1 | PRIMECO | | | BELLSOUTH | Telecorp |
| AERIAL | | NextWave | SPRINT | | Radiofone |
| SPRINT | Western | NextWave | AT&T | U S WEST | |
| AT&T | GTE | NextWave | SPRINT | CINCINNATI BELL | Western |
| Western | SPRINT | NextWave | AT&T | U S WEST | Magnacom |
| SPRINT | AERIAL | NextWave | ALLTEL | AT&T | DCC |
| AT&T | BELLSOUTH | NextWave | SPRINT | ALLTEL | AirGate |
| SPRINT | PACTEL | GWI | AT&T | WEST COAST | NextWave |
| SPRINT | PRIMECO | Indus, Inc. | AT&T | Western | NextWave |
| AT&T | PRIMECO | NextWave | SPRINT | Western | OMPT |
| SPRINT | PRIMECO | NextWave | Western | AT&T | OMPT |
| SPRINT | AT&T | Chase | Intercei | Intercei | OMPT |
| AT&T | intercel | NextWave | SPRINT | SPRINT | Northcoast |
| AT&T | SPRINT | NextWave | ACC | Northcoast | OMPT |
| Western | SPRINT | PCS 2000 | AT&T | U S WEST | NextWave |
| Intercel | SBM | Chase | SPRINT | ALLTEL | Telecorp |
| AERIAL | PRIMECO | NextWave | SPRINT | AT&T | Telecorp |
| AT&T | SPRINT | NextWave | Intercel | Intercel | Mercury PCS |
| SPRINT | AMERITECH | NextWave | AT&T | OMPT | 21st Century |
| SPRINT | PRIMECO | Pocket | AT&T | AT&T | Telecorp |
| Western | SPRINT | NextWave | Triad | AT&T | DCC |
| AT&T | BELLSOUTH | NextWave | SPRINT | ALLTEL | AirGate |
| SPRINT | intercel | Mercury PCS | ALLTEL | T&TA | OMPT |
| AT&T | BELLSOUTH | Urban | SPRINT | ALLTEL | ComScape |
| SPRINT | AT&T | OMPT | Gabelli | REAUCTION | Devon |
| AT&T | GTE | NextWave | SPRINT | Western | Devco |
| Intercel | PRIMECO | NextWave | SPRINT | ALLTEL | Southern Wireless, L.P. |
| AT&T | PRIMECO | NextWave | SPRINT | Western | Urban |
| SPRINT | AT&T | OMPT | OMPT | AT&T | Northcoast |
| OMPT | SPRINT | Gabelli | AT&T | AT&T | Northcoast |
| OMPT | SPRINT | NextWave | AT&T | ACC | Vtel |

Wireline companies own 79% of the cellular licenses and 87% of the A-and B-block PCS licenses in the top 50 markets In total, wireline companies own 57 percent of the cellular/PCS licenses in the top 50 markets

Source: FCC data and Donaldson, Lufkin & Jenrette Report, The Wireless Communications Industry (Spring 1997).

Appendix 2: Analyst Reports

SMITH BARNEY INC. FROM: BRUCE BARGE

THOMAS J. LEE Comments on WSJ article on FCC changes to C-block payments; not a surprise

07/11/97 Mobile Communication Systems (U.S. CMLX) THOMAS J. IKE — SUDGRAY:

Ξ

- * According to WSJ article today, the FCC is expected to announce changes for the C-block PCS licensees from quarterly to annual interest payments
- * The change in our opinion is not a surprise given the PCC previously "indefinitely" delayed quarterly payments on the debts
- * This does little to address the critical challenge facing C-block holders their high prices paid makes financing nearly impossible Met-net: the continued delays in C-block financing are a positive for both cellular and PCS: (1) it delays a new entrant and (2) any reduction/easing of terms will create a less desperate competitor and therefore maintain a more rational market. This particularly extends the lead enjoyed by existing PCS players such as Commission (OMPT-25, target \$31), Western Wireless (MMCA-25, target \$29) and Aerial (ARMI-35, target \$14)
- 07/11/97 Mobile Communication Systems (U.S. QULY) THOMAS J. LEE -- OPINION:

According to an article in the Wall Street Journal today, the FCC is expected to announce changes in interest installment payments for the C-block PCS (personal communications service) licensees from quarterly to annual interest payments.

- ** The change in our opinion is not a surprise given the FCC previously "indefinitely" delayed quarterly payments on the debts.
- ** A potential change to annual installments does little to address the critical challenge facing many C-block license holders their disproportionately high prices paid (compared to previous auction winners) makes obtaining financing nearly impossible, and therefore delays their extrance into the wireless marketplace.
- ** We believe any resolution to the debt outstanding will involve protected negotiations and probably ultimately result in one of two scenarios: (1) a revocation and resuction of the spectrum of defaulted C-block license owners or (2) an effective reduction of the present value of the debt owed to the FCC either through a reduction in principle value or extension/modification of payment terms.

Netwhet: We reithrate that the continued delays in C-block financing are a positive for existing wireless carriers, both cellular and PCS, for two reasons: (1) it delays a new entrant in the marketplace and (2) any reduction/easing of financing terms will create a less desperate competitor and therefore more likely maintain a rational merketplace. In any case, it appears that the wireless marketplace in the maxt few years will be a less crowded space (4 players total) than originally envisioned twelve months ago. We would note the following three observations:

- 1. This extends the time to market lead emjoyed by existing new entrants (PCS, or personal communications services) players such as Omnipoint (OMPT-rated 2S, target \$31), Hestern Wireless (HMCA-rated 2S, target \$29) and Aerial Communications (AERI, rated 3S, target \$14) and would be buyers of their stock.
- 2. Delays in the C-block also benefit the cellular incumbents including 360 Communications (NO-rated 2M, target \$30), AirTouch (ATI-rated 3M, target \$28), Vanguard Cellular (VCKIA-rated IH, target \$14) as their existing market share will be subject to less intense competition (one less competitor). Still, we believe urban cellular carriers are subject to the "cellular straight-jacket" and therefore remain cautious on AirTouch (see our 1097 review dated West 12 (1997).

WIRELESS WAVES

Mile Mile

A workly update of NATWEST's global Wireless Services & Wireless Equipment stocks Jeffray L. Hines (212) 602-5741

biocom courses rearing back led by CLECs (+32.9%), Cable (+23.7%), & Emms, (+19.1 MARKET RECAP: With one tracing day left, 2097 bishows strong market (S2P500 + 14.7%) as in. (+19.8%).

| And Linear Street, | 30 year it board wise | Winding (14) | Other (17) | PCSOM (11) | Sees | Epipera (2) | CHE (I) | 7 . 9 | (OU PROPOSED | Thermieds/M |
|--------------------|-----------------------|--------------|--------------|------------|------|-------------|---------|--------------|--------------|-------------|
| | d 624% | 111 | ᇋ | 룡 | 8 | 茲 | 136 | 알 | 111 | de Com |
| ı | 36 | Ž | 727 | K | K | | 235 | No. | 300 | Qr A |
| | -17 b | 25% | \$ 13 | Ş | £ | 3 | 2 | 29 | 103 | Monda |
| | -1600 | 73 | ş | | | Ħ | Ħ | | 88 | E |
| | 3 45 | 115 | Ş | 3 | ¥ | ğ | 198 | 193 | 119 | U Y |

originally bid. We find it disquiering that the same bidders who bid continue, it is a boun to incumbest operators, as the competitive disdictive will not become as trained as operator. So first accurated two basic scenarios seems likely: i) the RCC accepts less money analyse amends the payment structure, or 2) the RCC demands payments under the "original" terms. In either case, it appears any significant C-Block competition is at least a year off. If the RCC tie the licenses up in Chapter 11 court, after which they will have to be sessorioused (both could take considerable time). We note that the PCC has already "best" on its rules, by delaying payments. **a**p prices during the auction, and forced more "tational" and the RCC plays immibali (accrutio 2), definiting C-Blockers could tropped/were forced out will likely tie up the lices echaps "credible" biddess to drop out, are now asking the FOC to aggestions were due this week on what the FCC should do gening the C-Block FCS locateses, since they still have sizable this owned to the federal guy? I fi should also be no suprise that is C-Block winness in question officed up several suggestions. pends the finance structure (socurio 1), biddess that and their payments. To the extent that the C-block delays uding lengthening the firemeing/payment schedules, reducing interest rates, or take parmine on the dollar for what they 8 4 to ca of the C-Black? es in court. H

None & Notes: It Really is A Wireless World

The FCC issued a "proposal" to susmind sales for the 800 MHz
SMR section - which should allow NEXTEL (NXIL \$18 %-B) to NOSIA (NOSIA-575%-A). ESPENSON (SECTY-\$40%-H), and somes, 10 MHz of consignous spectrum quickly - silowing Nextel to bid far so called "lower" 800 channals, a new development. \$132M order for an AMPS expen MOTOROLA (MOT-\$76 7/8-H) amounced orders for nearly \$250 million of wireless infrastructure, including \$6504 for a GSM **HOTOROLA.** siong with UnWard Plan swork and SXM for a TACS expens enciop an open protocol for winders data, e.g. the way cellula with com on in Franci na bonta in China, and a et, autoconceri phase to on for times like stock

NATWEST SECURITIES

Janua 30, 1997

Volume 3, Issue 26

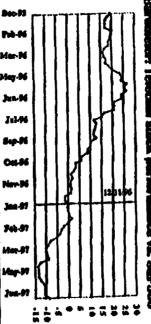
quotes, e-mail, fax, Inscreet, info-envices, enc. An open protect could hasten the development of larger scale wireless data services • GLENAYRE (GEMS-\$16 1/8-A) amounced what sould be the nationwide and upgrate able to RaFLEX for two-way.

• BELL CANADA (BCE-528 3/16-NF) is considering fixed order for an alphanomeric system is expressible to regional / Puerto Rico and its associates throughout Latin America. first of several paging infrastructure orders from CELPACE of ES 4

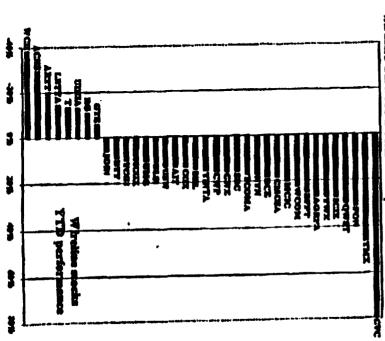
window as peat of its \$200M local network upgrade.

 WINSTAR (WCII-S13-NF) commenced commercial operated in the structure local loop at 38 GHz in its 5" city, San Diogram footprint in 47 of the top 50 mics in the US Winster also received 4 new ticenses from the FOC, giving it a

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e: 017 (212) 602-674 | e: (917) 731-0030; Page (808) 207-628 |

M. Larra, Teles er og (212) 802-5490 er (917) 731-0031: Pas

TELECOMMUNICATIONS SERVICES

July 8, 1997 - initiation of Coverage

RICHARD PRENTISS (813) 573-3800 x2567 TOM STASZAK RESEARCH ASSOCIATE



1892250

OMNIPOINT CORPORATION --(OTC-OMPT) - RATING: BUY (1)



| | | | 4000 |
|----------------|----------|-----------|---------------|
| EPS (FY=Dec) | 1996A(a) | 1997E | <u> 1998E</u> |
| Q1 (Mar) | \$(0.39) | \$(1.02)A | \$(1.82) |
| Q2 (Jun) | (0.47) | (1.35) | (1.95) |
| Q3 (Sep) | (0.55) | (1.64) | (1.95) |
| Q4 (Dec) | (1.21) | (2.49) | (2.72) |
| Full Year | \$(2.71) | \$(6.51) | \$(8,44) |
| Revenues (mil) | \$0.5 | \$68.7 | \$243.5 |
| EBITDA (mil) | \$(84.8) | \$(184.6) | \$(149.5) |

(a) Full-year EPS based on average chares for the full year.

Graph @ Automatic Data Processing, Inc., 1997.

Superior of the superior of th in the state of th (Post (Post)

- WE ARE INITIATING COVERAGE OF OMNIPOINT WITH A BUY (1) RATING AS ITS INTERNATIONALLY ACCLAIMED SENIOR MANAGEMENT TEAM IMPROVES COVERAGE IN NEW YORK AND PREPARES TO LAUNCH SERVICE IN PHILADELPHIA.
- As a Pioneer's Preference winner and small business, OMPT acquired its LICENSER AT A DISCOUNT OR WITH VERY FAVORABLE GOVERNMENT FINANCING. ITS LARGE, LUCRATIVE MARKETS HAVE HIGH POPULATION DENSITIES AND INCLUDE INTERNATIONAL CITIES THAT MAKE OMNIPOINT AN IDEAL PARTICIPANT IN THE CONTINUED CONSOLIDATION OF THE GLOBAL TELECOMMUNICATIONS INDUSTRY.
- + THE FCC IS ACTIVELY CONSIDERING IMPROVING THE TERMS OF THE GOVERNMENT Financing. We believe that regardless of its final decision, our Mid-Year 1998 TARGET PRICE OF \$27 COULD IMPROVE BECAUSE OF BETTER FINANCING TERMS OR SLOWER TO MATERIALIZE COMPETITION.
- COMBINING THIS WITH THE POTENTIAL OF ITS TECHNOLOGY BUSINESS, "BASEBALL TRADING CARD" LICENSES AND CURRENT 71% UPSIDE TO OUR TARGET PRICE PROVIDES WHAT WE BELIEVE IS A COMPELLING REASON TO INVEST IN OMNIPOINT.

0 1937 Raymond James & Associates. Inc.

Raymond James Financial Center 13716 - Research \$13-573-1880 - Tall Erro M





1 . ..

CONGRESS OF THE UNITED STATES CONGRESSIONAL BUDGET OFFICE

A: CBO S-TUDY:



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per-megahertz price paid for the Chicago licenses was \$1.05—notably higher than the prices paid for the single competitively auctioned licenses in the New York and Los Angeles markets (\$0.56 and \$0.86, respectively). Prices could be expected to vary between markets on the basis of consumer demographics—income and time spent commuting in automobiles, for example—but differences as large as those evident in the A&B block auction are too great to be explained by such factors.

Additional questions about the efficiency of the distribution of licenses in the A&B block auction and the two other broadband sales that followed it are raised when the average prices for licenses are compared. The average per-person, per-megahertz price in the A&B block was about \$0.50. The C block auction registered a substantially higher price of about \$1.35, which drops to about \$0.80 after adjusting for the terms of the installment payments available to the small businesses that won C block licenses (see Box 1, which discusses the differences in prices paid for licenses in the A&B and C block auctions). In contrast, the average price in the D,E&F auction was about \$0.35, lower than that reported in either of the broadband PCS auctions that preceded it. Prices could be expected to vary among the auctions because the licenses sold granted the right to use different-sized blocks of spectrum that allowed the licensee to operate in different-sized geographic areas. Nevertheless, the ranking of average prices from high to low corresponds to the potential competition in each of the auctions as measured by the eligibility ratio. That ratio was 6.7 for the C block sale, compared with 1.9 for the A&B block sale and 1.7 for the D,E&F sale.

Why wasn't the A&B block auction more competitive? Fewer bidders entered that auction because the FCC restricted participation by the current holders of cellular licenses and permitted would-be competitors to join forces before the auction began. Both decisions should be evaluated as trade-offs between ensuring competition in wireless telecommunications markets and ensuring competition in the auctions for licenses to participate in those markets. Specifically, the commission chose to sacrifice the opportunity to maximize auction receipts to ensure an adequate number of technically capable and financially sound service providers and, ultimately, to sustain the competitive pricing and services that such providers would bring to telecommunications markets.

Table 2.
Total Population in Markets for Personal
Communications and Cellular Telephone Service
Covered by the Three Largest Winners in the A&
Block Auction (In millions of people)

| | Personal Communi- cations Services | Cellular Telephone Services | Tota |
|-------------|---|-----------------------------------|------|
| AT&T | 107.0 | 68.3* | 175 |
| WirelessCo | 144.9 | 28.4 ^b | 173 |
| PCS PrimeCo | 57.2 | 110.4° | 167 |

SOURCE: Congressional Budget Office based on Peter Cramto
"The FCC Spectrum Auctions: An Early Assessmer
(draft, University of Maryland, July 15, 1996), Table
and Cellular Telephone Industry Association, The Wir
less Marketbook (Spring 1996).

- a. Estimated as the difference between the total mobile telephor population as reported by the Cellular Telephone industry Assoc ation and the total population in the personal communication services markets as reported by Cramton.
- Represents the cellular telephone markets of WirelessCo parners Comcast (7.6 million people) and Cox Communication (20.8 million people).
- c. Represents the cellular telephone markets of Bell Atlantic/NYNE (57.7 million people) and AirTouch (55.2 million people) adjusts downward by 2.5 million people for overlapping licenses in Air zona markets.

The result of the A&B block auction that most strongly suggests an efficient distribution of license was the success of bidders in aggregating groups clicenses. Each of the three largest winning bidders-AT&T, WirelessCo, and PCS PrimeCo—won license that enable them to offer nationwide service.²⁴ Th PCS licenses won by AT&T and PCS PrimeCo, where combined with the cellular telephone licenses that each bidder already owned, provide nearly complete national coverage. WirelessCo, the largest winner in the auction, had the smallest cellular coverage but won 29 PCs

^{24.} WirelessCo is a combination of the long-distance telephone compan Sprint and three large cable television companies (TCI, Comcast, an Cox Communications). After the A&B block auction, WirelessC changed its name to SprintCom. PCS PrimeCo is a combination of three regional Bell operating companies (NYNEX, Bell Atlantic, an USWest) plus AirTouch (a spin-off of another former Bell company PacTel), which provides cellular telephone service in PacTel's operating area.

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM S-4 REGISTRATION STATEMENT **UNDER** THE SECURITIES ACT OF 1933

POWERTEL, INC.

(Exact Name of Registrant as Specified in its Charter)

<TABLE>

<CAPTION>

<S>

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<C>

Delaware

4812

58-1944750

(State or Other Jurisdiction of (Primary Standard Industrial (I.R.S. Employer Identification Number) Incorporation or Organization) Classification Code Number)

</TABLE>

1233 O.G. Skinner Drive, West Point, Georgia 31833 (706) 645-2000

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Allen E. Smith

President and Chief Executive Officer

Powertel, Inc.

1233 O.G. Skinner Drive

West Point, Georgia 31833

(706) 645-2000

(706) 645-9523 (Fax)

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

With a Copy to:

Glenn W. Sturm, Esq. James Walker, Esq.

Jill F. Dorsey, Esq.

Powertel, Inc.

Nelson Mullins Riley & Scarborough, L.L.P.

1233 O.G. Skinner Drive

First Union Plaza, Suite 1400

West Point, Georgia 31833

999 Peachtree Street, N.E.

(706) 645-2000

Atlanta, Georgia 30309

(706) 645-9523 (Fax)

(404) 817-6000

(404) 817-6050 (Fax)

ACTUAL

AS ADJUSTED

\$ 500,217

| · | | THOUSANDS) | | |
|---|--|--------------|-------|-----------|
| <\$> <c></c> | <c< td=""><td></td><td></td><td></td></c<> | | | |
| CASH. CASH EQUIVALENTS AND SHORT-TERM II | NVESTMEN | TS | \$ 20 | 7,511 |
| | | | | |
| RESTRICTED CASH FOR PAYMENT OF INTEREST | | s | | \$ 89,618 |
| CASH HELD IN ESCROW(B) | \$ | \$ 5,4 | 05 | |
| CURRENT PORTION OF LONG-TERM DEBTLONG-TERM DEBT: | | | \$ | 112 |
| February 1996 Notes | | 223,080 | | |
| April 1996 Notes | | 223,738 | | |
| Notes | | 00,000 | | |
| Vendor Financing Agreement | | | 33 | |
| | 715 | 325 | | |
| Total long-term debt | 551,366 | 850,976 | | |
| STOCKHOLDERS' EQUITY: Preferred Stock Series A, \$.01 par value; 100,000 is | sued | | | |
| and outstanding; convertible | | 1 | | |
| Preferred Stock Series B, \$.01 par value; 100,000 is | | | | |
| and outstanding; convertible | | 1 | | |
| Preferred Stock Series C, \$.01 par value; 50,000 iss | | | | |
| and outstanding; convertible | | 1 | | |
| Preferred Stock Series D, \$.01 par value; 50,000 iss | ued | | | |
| and outstanding; convertible | | t | | |
| Common Stock, \$.01 par value, 55,000,000 shares au | thorized | | | |
| and 26,864,511 shares issued and outstanding(c) | | 269 | 269 | |
| Additional paid-in capital | 430,058 | 474,831 | | |
| Accumulated deficit | (52,332) | (8,657) | | |
| Deferred compensation | (165) | (165) | | |
| Treasury stock | (345) | (345) | | |
| Total stockholders' equity | 377,487 | 7 465,937 | | |
| Total capitalization | \$ 928,965 | \$ 1,317,025 | | |

</TABLE>

Reflects the estimated portion of the net proceeds from the Offering to be used to purchase Pledged Securities to secure the first six scheduled interest payments on the Notes. See "Description of the Notes - Security."

- Reflects the \$5.4 million of proceeds from the Maine Disposition that is being held in escrow for indemnification or purchase price adjustment obligations.
- Includes 35,000 shares outstanding as of March 31, 1997 under the Company's 1995 Employee Restricted Stock Plan, but excludes 2,374,797 shares of Common Stock issuable upon exercise of stock options outstanding as of March 31, 1997. See "Management." Also excludes: (i) the 1,143,904 shares issuable upon exercise of the Warrants; (ii) the 9,090,900 shares of Common Stock issuable upon conversion of the Series A Convertible Preferred Stock and Series B Convertible Preferred Stock, and (iii) the 3,529,412 shares of Common Stock issuable upon conversion of the Series C Convertible Preferred Stock and Series D Convertible Preferred Stock. See "The Preferred Stock Sales."

SELECTED HISTORICAL FINANCIAL INFORMATION

The following table sets forth certain selected historical financial information for the Company as of and for each of the years in the five-year period ended December 31, 1996 and as of and for the three months ended March 31, 1997 and 1996. The financial information as of and for each of the years in the five-year period ended December 31, 1996 was derived from the consolidated financial statements and notes thereto of the Company, which have been audited by Arthur Andersen LLP, independent public accountants. The financial information as of and for the three months ended March 31, 1997 and 1996 was derived from the unaudited financial statements of the Company. In the opinion of management, the unaudited financial statements include all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the information set forth herein. Operating results shown in the following table will not be indicative of future performance due to the capital requirements associated with the buildout of the Company's PCS System.

The selected historical financial information should be read in conjunction with "Pro Forma Financial Information," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Company's consolidated financial statements and notes thereto and other financial and operating information included elsewhere in this Prospectus.

<TABLE> <CAPTION>

| CIL HOW | | MONTHS RCH 31, | ENDED | YEAR ENDED DECEMBER 31. | | | | |
|--|---------------|-------------------|---------|-------------------------|-----------|-------------|------------|--------|
| _ | 1997 | 1996 | 1996 | 1995 | 1994 | 1993 | 1992 | |
| • | | (DOLL | ARS IN | THOUSAN | DS, EXCI | EPT PER SHA | ARE DATA |) |
| <\$> | <c></c> | <c></c> | <c></c> | <c></c> | <c></c> | <c></c> | <c></c> | |
| STATEMENT OF OPER | | | | | | | | |
| Service revenues | | | | | | | | |
| Equipment sales | | 5,025 | 854 | 7,250 | 3,928 | 2,859 1 | ,121 9 | 925 |
| Total revenues and sales | ············· | 19,109 | 7,850 | 39,12 | 29,31 | 2 21,762 | 9,349 | 7,160 |
| Cost of services | | 5,428 | 684 | 5,811 | 2,394 | 1,921 5 | 574 44 | 12 |
| Cost of equipment sales | | 11,987 | 694 | 11,653 | 3,127 | 2,391 | 1,010 | 828 |
| Operations expenses | | | | | | | | 1,214 |
| Selling and marketing | | | | | | | | 1,187 |
| General and administrati | | | | | | | | |
| Depreciation | | | | 5,887 | | | 53 83 | |
| Amortization | ••••• | 1,178 | 881 | | | | 390 73 | 35 |
| Total operating expense | | • | 7,27 | | 6 22,7 | | 7,675 | 6,617 |
| Operating income (loss) | | | | | | 6 3,999 | 1,674 | 543 |
| Interest (income) expens | e(a) | 4,543 | (739 | 9) (3,17 | 5) 1,65 | 7 635 | 46 | 131 |
| Miscellaneous (income) | | 4 | 73 | 303 1,2 | 226 (2 | 95) (48) | | 260 |
| Income (loss) before inc | ome taxe | | | 1 008 (2 | | | 412 1.5 | 80 152 |
| Income tax (benefit) exp | | | | | | | 567 | 52 |
| Net income (loss) before cumulative effect | | (29,566) | 536 | (25,028) | 3,004 | 1,877 | 1,013 | 100 |
| Cumulative effect of cha accounting principle, no | | b) | (2,58 | 3) (2,58 | 3) | | | - |
| Net income (loss) | s | (29,566) \$ | (2,047 | (27,61 | 1) \$ 3,0 | 004 \$ 1,87 | 7 \$ 1,013 | \$ 100 |

Earnings per share: Net income (loss) before cumulative effect of change .02 in accounting principle \$ (1.10) \$.03 \$ (1.00)\$.29 \$.19 \$.16 \$ Cumulative effect of change in (.10)(.13)accounting principle, net of tax(b). .02 .29 \$.19 \$.16 \$ Net income (loss) per share \$ (1.10) \$ (.10)\$ (1.10)\$ Average common and common equivalent shares outstanding 26,812,000 19.899,000 25,087,000 10,281,000 9,765,000 6,317,000 6,289,000 OTHER FINANCIAL AND OPERATING DATA: EBITDA(c)\$ (12,244) \$ 4,193 \$ (2.466) \$ 11,992 \$ 7,720 \$ 3,469 \$ 1,850 Ratio of earnings to fixed 27.3x 2.1x charges(d) 3.9x 5.5x Capital expenditures \$ 36,209 \$ 10.874 \$ 233,551 \$ 7,661 \$ 2,866 \$ 1,105 \$ Cellular subscribers at end 49,731 47,617 38.582 28.624 10.590 7,447 of period(e) 40.403 Net cellular population 277,400 equivalents(f) 728,200 281,800 737,800 737,800 737,800 732,900 PCS Subscribers at end of period 34,886 14.892 Net PCS population equivalents(f) 24,293,000 17.460,000 17.460,000 </TABLE> 33 <PAGE> 39 <TABLE> <CAPTION> AT DECEMBER 31, AT MARCH 31. 1997 1996 1995 1994 1993 1992 (DOLLARS IN THOUSANDS) <\$> <C> <C> <C> <C> <C> **BALANCE SHEET DATA:**

Working capital \$ 200,646 \$ 256,349 \$ 977 \$ 2,710 \$ Property and equipment, net 284,713 251,269 18,066 13.262 5,394 Licenses, goodwill and other 402.321 24.904 23.903 Total assets 973,094 947,117 74,330 50,812 10,517 504,065 2.019 2,194 Long-term obligations 551,366 29,411 11,030 Retained earnings (accumulated deficit) (22,766)4,845 1.841 (36)(1,048)(52,332)Stockholders' equity 377,487 407,007 36,674 33,374 5,983 4,960 </TABLE>

⁽a) The Company had interest income of \$3.3 million and \$2.3 million for the three months ended March 31, 1997 and 1996, respectively, and \$17.3 million for the year ended December 31, 1996. The Company had no interest income for the years ended December 31, 1995, 1994, 1993 and 1992. Excludes capitalized interest of \$6.7 million and \$2.7 million for the three months ended March 31, 1997 and 1996, respectively, and \$29.0 million for the year ended December 31, 1996. During the construction of the PCS System, the cost of the PCS licenses and the costs related to construction expenditures are considered to be assets qualifying for interest capitalization under FASB Statement No. 34 "Capitalization of Interest Cost." Accordingly, management expects that a majority of the interest on the February 1996 Notes, the April 1996 Notes, the Vendor Financing Agreement and the Notes will be capitalized during the construction of the PCS System. See "Pro Forma Financial Information."

⁽b) During 1996, the Company changed its method of accounting for costs incurred in connection with certain promotional programs under which

- customers receive discounted cellular equipment or airtime usage credits. Under its previous accounting method, all such costs were deferred and amortized over the life of the related non-cancelable cellular telephone service agreement. Under the new accounting method, the costs are expensed as incurred.
- (c) EBITDA represents earnings from continuing operations before interest expense, income taxes, depreciation and amortization. EBITDA is provided because it is a measure commonly used in the industry. EBITDA is not a measurement of financial performance under generally accepted accounting principles and should not be considered an alternative to net income as a measure of performance or to cash flow as a measure of liquidity.
- (d) Earnings were insufficient to cover fixed charges by \$36.3 million and \$2.2 million for the three months ended March 31, 1997 and 1996, respectively, and by \$56.2 million for the year ended December 31, 1996. Earnings consist of income before income taxes, plus fixed charges, except where capitalized. Fixed charges consist of interest charges and amortization of debt issuance costs, in each case whether expensed or capitalized, and the portion of rent expense under operating leases representing interest.
- (e) Cellular subscribers at end of period include 14.216. 20.288, 25.456, 21,320 and 26,486 subscribers in the State of Maine for the years ended December 31, 1994, 1995 and 1996 and for the three months ended March 31, 1996 and 1997, respectively. See "The Maine Disposition."
- (f) Net Population Equivalents means the estimated population of the license market area multiplied by the percentage ownership of the license. The estimated population is based on the 1996 Paul Kagan Associates, Inc. Cellular/PCS POP Book. The Company owns 100% of each of its PCS licenses and 100% of each of its cellular licenses. For the years ended December 31, 1994, 1995 and 1996 and the three months ended March 31, 1996 and 1997. Net Cellular Population Equivalents include 441,900, 442,000, 442,200, 442,000 and 442,200 population equivalents, respectively, from the Company's Maine market areas. See "The Maine Disposition."

Appendix 5: Articles on Diminishing Spectrum Values

WALL STREET JOURNAL.

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TUESDAY, JUNE 3, 1997

INTERNET ADDRESS: http://wsi.com

Dollar Days

Sale of FCC Licenses In Several States Nets Budget Pocket Change

Public Airwaves Went Cheap After Congress Pushed Agency for Fast Auctions

McLeod Bags Four for \$4

By BRYAN GRULEY

Staff Reporter of THE WALL STREET JOURNAL CEDAR RAPIDS. Iowa — Clark McLeod loves grabbing a cheap cafeteria lunch at his company's new headquarters here. One recent afternoon, he paid only \$4.80 for a generous slice of cheese pizza, a barbecued-beef sandwich and coffee.

But Mr. McLeod got an even better deal in April when he bought government !i-

censes to use the public airwaves. In a Federal Communications Commisauction. sion McLeodUSAInc. was the high bidder for licenses to offer wireless communications to 15 million people in four states.

The price: Four bucks.

That's right.
McLeodUSA paid \$1



Clark McLeod

for each license giving it permission to serve most of Iowa. Wisconsin, Minnesota and Nebraska. The licenses will play their part in Mr. McLeod's big plan to sell bundled local and long-distance telephone, cellular, paging and Internet services across the upper Midwest. Bryce Nemitz, a company vice president, deadpans: "Our CFO guaranteed we could double our money."

McLeodUSA's good fortune is now the subject of spirited debate in Washington, with policymakers torn between the dueling goals of fostering competition in telecommunications and balancing the federal budget. While no one doubts Mr. McLeod will fuel competition — he sold his first company to MCI Communications Corp. for \$1.25 billion — they profess shock and dismay that anyone could buy an FCC wireless license for less than the price of a gallon of gasoline.

Thirteen prior FCC auctions of rights to use electromagnetic spectrum garnered \$23 billion in bids for 4.249 licenses — or about \$5.4 million a license. Winners have poured more than \$10 billion into the U.S. Treasury, with more to come.

But the latest auction looks more like a fire sale. Congressional budgeteers expected it to fetch \$1.8 billion, but bidders offered just \$13.6 million for 128 licenses—a measily average of \$106,000 apiece. Bargains abounded. Bellsouth Corp., the Atlanta-based Baby Bell, snagged licenses for Kentucky. Tennessee and the Carolinas for just \$1,002 each. And, like McLeodUSA, two other companies paid \$1 each for other Missouri, Minnesota and Wisconsin licenses.

Budget Hole

"It was just a comedy of errors," complains John McCain, the Arizona Republican who chairs the Senate Commerce Committee.

Congress hurried the auction because it wanted to plug a hole in the budget. This meant potential bidders didn't have time to develop business plans and line up financing. Telecommunications-equipment makers weren't sure what to build or what to spend, because the FCC didn't designate the spectrum for a particular use. Mr. McLeod and other lucky bidders took advantage.

For decades the FCC parceled out spectrum via "comparative" hearings that took years and at lotteries that handed winners free licenses that they frequently resold for windfall profits. But in 1993 lawmakers decided auctions would deliver spectrum to worthy competitors more quickly, while raising more money for the government.

Now critics contend so much spectrum has been shopped that its market value is falling, and they say future auctions could reap fewer and fewer deficit-cutting dollars. That could be a problem because the balanced-budget deal cut by Congress and the Clinton administration expects spectrum auctions to raise \$26.3 billion over the next five years.

Television broadcasters, worried because the budget deal also targets some of their existing spectrum for auction, are telling lawmakers that auctions have run their course. (Separately, broadcasters recently were awarded free licenses to beam digital signals — a move ordered by Congress and blessed by many lawmakers, Sen. McCain excluded, who now complain the latest auction raised too little cash.)

'Create Scarcity'

Cellular-phone-service companies that won in prior auctions complain that falling prices have devalued their licenses. This makes it harder for them to raise capital for their wireless systems, which in turn delays competition, they say. They want Congress to have the FCC allot spectrum more slowly.

At a recent Washington soiree, Mimi Dawson, a lobbyist for Motorola Inc., the big wireless-communications company, flashed her diamond ring and said, "You see this? It wouldn't be worth a dime if DeBeers (the South African cartel) put their diamonds on the market the same way we're putting spectrum on the mar-

Please Turn to Page A10. Column 1

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C Licenses Nets Pocket Change

Continued From First Page

ket. In an interview, she adds: "If you i want to create value, you've got to create scarcity.

Sen. McCain and other lawmakers gree, and they are preparing legislation requiring the FCC to set minimum bids and limit the number of auctions held in a given time period. (Separately, the FCC and the Justice Department are investigating that and other auctions for possible illegal bid-signaling. McLeodUSA is one of many bidders to receive Justice Department remests for information. The company demies any wrongdoing.) Congress isn't akely to overturn the last auction, but in the future. We've got to maximize the value of this public asset," Sen. McCain

But FCC Chairman Reed Hundt contends limiting auctions would also limit competition. He says the cellular industry wants to slow down auctions because "it's not an industry that loves seeing more competitors. And he argues that money generated by auctions is less important than the fact that more than 570 licensees have permission to offer new services at lower prices. "McLeod's license is a cheap ticket to ride the information highway. Mr. Hundt says, "He'll hire people, he'll pay taxes, he'll create an entrepreneurial venture. What's not to like?"

Nothing at all, if you ask Mr. McLeod. "What an exciting time," says the 50-year-old executive, striding through his headquarters at a pace just short of a jog. With the company payroll rising sixfold to 2,400 workers in the past two years, employees have been tripling up in cramped offices scattered throughout 11 buildings in downtown Cedar Rapids.

Now, amid stacks of boxes and the smell of fresh paint, about 1,000 are moving into a new complex that sprawls across a former cornfield outside town. It boasts its own post office and health club, and an acre-sized room of office cubicles marked with color-coded, made-up street addresses. Mr. McLeod's office, with a desk he bought at J.C. Penney in 1985, is at the corner of 11th Avenue and 11th Street. But he says. "I feel like somebody picked me up and put me down in heaven.

He has been there before. In 1980, the former high-school teacher and two pals started a company that became Telecom#USA, the nation's fourth-largest long-distance carrier. When long-distance giant MCI bought it in 1990, Mr. McLeod walked away with \$50 million. "Once you taste that kind of accomplishment," says, "you want to taste it again.

Having mastered long-distance service, he decided to compete against en-

Prentiss Acquires a Development

DALLAS - Prentiss Properties Trust said it acquired a six-building industrial development in suburban Los Angeles for \$17.3 million.

The real-estate investment trust said it plans to renovate and expand the property. which currently totals 466,708 square feet of rentable space.

trenched local phone companies. Now reunited with seven executives who helped build Telecom*USA, he aims to create a 'super regional" carrier offering one-stop phone service - bundling local, long distance, paging, Internet and other services - in 12 Midwestern states, focusing on small and midsize towns. This is an area of the country the big guys could care less about," he says.

The "big guys" are U S West Inc..

the Denver-based Baby Bell, and Ameritech Corp., the Chicago-based Bell. Mr. McLeod jokingly calls U S West "Dino, for dinosaur, and a drawing in Mr. Nemitz's office shows a long-necked dinosaur labeled "U S West" with its head stuck in its posterior. A spokeswoman for U.S. West says it's "just fine if competitors think of us that way; it means they'll be off

McLeodUSA has yet to post an annual profit and last year nad a loss of \$22.3 million on revenue of \$\$1 million. But Mr. McLeod says he is focusing on market share. He says the company has won customers on 27% of the business-telephone lines in lowa markets it has invaded, and on 17% in the Illinois cities where it competes, chiefly by reselling service purchased at wholesale rates from U S West and Ameritech. Meantime, the company is building its own fiber-optic network, and Mr. McLeod predicts profits will flow once customers migrate to that system, perhaps by 1999. The plan was convincing enough to help McLeodUSA raise SI billion in equity and debt last

Mr. McLeod's wireless strategy has come along more slowly. Three years ago

he asked Keith Molof, a former Ameritech manager, to explore bidding in an FCC auction. Mr. Molof, 39, tracked a few auctions before entering one last August for licenses to provide sonal communications services." new generation of wireless phone and services. paging The company spent



\$32.8 million, or about \$5 for each of the 6.5

million people its 26 licenses let it reach. Meanwhile, a separate batch of spectrum suddenly became available. Last September. Congress was seeking fresh funds to complete the fiscal 1997 budget. After consulting the FCC, lawmakers ordered an auction of unused spectrum vaguely designated for "wireless communications services." The Congressional Budget Office predicted this would raise \$1.8 billion - but to be counted in the budget, the money had to be in the Treasury by Sept. 30, 1997. So Congress told the CC to auction the spectrum by April 15.

This gave the FCC about five months to write auction rules and decide what the spectrum could be used for, a process of debate and compromise with industry that

normally takes a year or more. In February, the agency completed rules that let bidders use airwayes for almost everything, from high-speed Internet transmissions to wireless cable TV. Only mobilephone service was limited, because of potential interference with another band of spectrum.

Cellular companies and telecommunications-equipment makers objected to the imprecise rules, saying they couldn't determine what types of equipment they ought to build or at what cost. Thomas Wheeler, president of the Cellular Telecommunications Industry Association, a lobbying group, says the FCC neglected its responsibility. "It's the tree-market ap-

proach gone haywire, he says.

Chairman Hundt defends the FCC's hands-off approach. With more time, affected industries could have developed clearer plans, he says, but adds, "I don't think the government should tell industry how to use spectrum." The FCC chose not to set minimum bids for the auction, partly because officials thought it would discourage bidders and, contrary to Congress's orders, leave a lot of unauctioned licenses. Also, FCC officials say it would have been difficult to set minimums for licenses in dozens of different U.S. markets.

On Feb. 5. Michele Farquhar, thenchief of the FCC Wireless Bureau, warned lawmakers by letter that bidders "may not have had sufficient time . . . to achieve a successful auction." Mr. Hundt enlisted wireless-industry lobbyists, including Mr. Wheeler, to persuade Congress to delay the auction so bidders would have more time to prepare. But they declined, Mr. Wheeler says, because it already was too late to change Congress's mind.

Out in Iowa, Mr. McLeod was in a quandary. He thought the spectrum surely could be used for stationary local-phone service and perhaps for remote reading of utility meters. But suppliers couldn't predict with certainty the costs of equipment needed for this particular band of spectrum - leaving "a huge hole" in the business plan. Mr. Molof says.

Mr. McLeod figured other potential bidders faced the same problem, so licenses just might be a bargain. He decided to make a few modest bids. After paying \$5 a potential customer in the previous auction, McLeodUSA now expected to pay no more than a penny a customer. "If the licenses were all but free." Mr. McLeod says, "we wanted access to them.

Shortly after 8 a.m. on April 15, Mr. Molof sat down at a fourth-floor computer at McLeodUSA's old downtown headquarters. He had wired the FCC a required good-faith payment of \$3,005,000, although he really didn't expect to bid more than \$150,000. Just before the computer dialed the FCC auction computer, a message told Mr. Molof his toll call would cost \$2.30 a

minute.
A grid appeared, listing cities and regions where licenses were available. Mr. Molof moved his cursor to "Milwaukee," and inserted the numeral "1" in the "bid amount" column - for \$1. Twice the computer asked if he was sure: wice he

Manufacturers Planning More Hires, Survey Says

By a WALL STREET JOURNAL Staff Reporter CHICAGO - A new survey said more U.S. manufacturers plan to increase hiring this year, reflecting continued strength in the U.S. job market.

The study, by Grant Thornton LLP Chicago, said 59% of U.S. manufacturers plan to add full-time, permanent production employees this year, up from 46% a year earlier. About 32% say they plan to keep full-time stail size the same, while 7 plan to cut payrolls.

The study poiled executives from 257 U.S. manufacturing companies with annual sales between \$10 million and \$500 million.

Under present economic conditions manufacturers are increasing capacity and hiring new workers, said Martin E Cooperman, director of Grant Thornton : manufacturing/distribution group.

The survey found that 71% of execu tives say they're "optimistic" about the U.S. economy, while 3% say they're pessimistic and 26% are uncertain Nearly 75% of manufacturers said profit for 1997 will rise above last year levels - up from 60% a year ago and 57% in April of 1995.

A smaller percentage, about 63%, sai 1998 earnings would also exceed the prio vear's levels.

answered "yes." He entered three more bids and, by the time he logged off, I toll-call bill was about \$30.

For the next week, Mr. Molof check periodically to see if he needed to raise bids. Instead, he found that rivals he i expected to bid were dropping out. Wi the FCC ended the auction April 25, no had topped his \$1 offers.

A beaming Mr. Molof burst into McLeod's office with the good news. F dollars for 15 million customers," he sa "Mission accomplished." They slap high-fives and Mr. McLeod handed Molof four one-dollar bills. He is hav them framed.

The company has yet to receive formal licenses, but the FCC recently s something else just as welcome: a ref of \$3,004,996.

Morgan Stanley, Dean Witter NEW YORK - Dean Witter, Discove Co. and Morgan Stanley Group Inc. yesterday that they have completed th

\$10.2 billion merger. The stock of the combined firm, wi will be known as Morgan Stanley, D Witter, Discover & Co., started trace

vesterday under the symbol "MWD." Morgan Stanley Group and Dean ter. Discover announced in February they planned to merge, creating the gest securities firm in terms of ma

capitalization. Separately, Standard & Poor's C said it has raised the long-term senior ratings of the former Dean Witter. cover to single-A-plus from single-A the same time. S&P affirmed the sing plus long-term senior debt ratings of former Morgan Stanley.